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ABSTRACT

In a study designed to assess effects of administering the Metropolitan Reading Test (MRT) in Spanish versus English, 100 Puerto Rican kindergarten pupils were randomly split into two groups. The MRT was administered in English to one group and in a Spanish translation to the other group. The group who took the Spanish version significantly surpassed the group who took the English version with respect to total score and all but the two most nonverbal subtests. These differences were particularly evident for, but were not exclusive to, the subsample from the bilingual classes. (Author/DEP)

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A Further Examination of the Effects of Administering the Metropolitan Reading Tests in Spanish and English to Spanish-Speaking School Entrants

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Although the use of the native language of Spanish-speaking children in the public schools has been greatly expanded in recent years for purposes of instruction, it has barely been examined with respect to instrumentation. Bilingual education, primarily for Spanish-speaking students in the lower grades, has been the subject of a great deal of research as well as development during the past decade (Bernal, 1974). Yet relatively minimal efforts have been expended to evaluate and optimize the use of Spanish as a means of testing as well as teaching Spanish-speaking students.

One of the most widely used tests for Spanish-speaking youngsters in bilingual education programs as well as in regular English-only classes is the Metropolitan Readiness Test (see National Consortia, 1971). In a previous issue of this journal, Johnson (1971) pointed out cultural barriers in the Metropolitan series for minority youngsters in general. The present study is intended to examine the linguistic factor in administering the MRT to Spanish-speaking students in particular.

In a prior study designed to assess the effects of administering the Metropolitan Readiness Test in Spanish and English to spanish-speaking school entrants, Davis and Personke (1968) found generally non-significant differences between the two modes of administration. The subjects of their study were 88 Mexican-American students in their first year of school. The larger subsample (n=53) was derived from classes for pupils judged deficient in English language ability. The other subsample

(n=25) came from regular first grade classes. The English-deficient group was administered the Spanish version of the MRT followed three weeks later by the English version. The remaining 35 pupils were tested in English first and then, after the same interval, in Spanish. The results revealed significant differences favoring the Spanish version for subtest 1 (Word Meaning) and favoring the English version for subtests 4 (Alphabet) and 5 (Numbers).

The results obtained by Davis and Personke are contrary to the weight of previous research findings relative to the language barriers generally presented by standardized tests for Spanish-speaking students, especially at the lower grades (Zirkel, 1972). The present study was designed to re-examine the effect of translating the MRT for Spanish-speaking school entrants. Specifically, the purposes of the study were to determine 1) whether administering the MRT in Spanish makes a significant difference on the scores of Spanish-speaking students; 2) whether these differences obtain for students in bilingual and all-English classes, respectively.

METHOD

Subjects were 100 Puerto Rican kindergarten pupils from four elementary schools in a city in central Connecticut. The sample was randomly derived 50/50 from bilingual and regular classes, respectively. Pupils placed

in the bilingual classes generally had been adjudged to be deficient in English language ability. They received instruction in Spanish and English. The children in the regular classes were taught only in English.

Form A of the MRT was translated by a group of Spanish-speaking teachers into colloquial Spanish appropriate to the subjects of the study. The subsample from the bilingual classes and the subsample from the regular classes were each split on a random basis so that half of each subsample were tested in Spanish and the other half in English. T tests were used to determine if the mean results were significantly different for the total sample and for the respective subsamples.

RESULTS

Means and standard deviations for the Spanish and English versions of the MRT for the total group and the bilingual and regular subgroups are presented in Table I along with the results of the t tests.

(See next page for Table I)

Table I

Means, Standard Deviations, and t Values

Total Group	MRT Total	MRT Subtest[a] 1	2	3	4	5	6
Spanish(n=50)							
$\bar{x}$	64.32	11.50	11.66	9.96	10.18	14.42	6.92
s	13.67	2.85	2.52	2.42	3.82	6.45	3.30
English(n=50)							
$\bar{x}$	51.58	8.36	9.20	8.34	8.76	10.30	7.08
s	10.37	3.48	2.47	2.99	3.76	4.15	2.84
t	5.25**	4.93**	4.93**	2.98**	1.87	3.80**	0.26
Bilingual subgroup							
Spanish(n=25)							
$\bar{x}$	73.16	12.80	12.00	10.48	12.12	18.64	7.12
s	10.72	1.66	2.34	2.35	3.56	4.30	3.61
English(n=25)							
$\bar{x}$	54.12	9.04	9.00	8.36	9.40	11.52	7.04
s	11.00	3.42	2.50	3.35	3.59	4.31	2.88
t	6.20**	4.94**	4.38**	2.59*	2.69**	5.85**	.09
Regular subgroup							
Spanish(n=25)							
$\bar{x}$	55.48	10.20	11.32	9.44	8.24	10.20	6.72
s	10.20	3.21	2.69	2.42	3.04	5.41	3.02
English(n=25)							
$\bar{x}$	49.04	7.68	9.40	8.32	8.12	9.08	7.12
s	9.23	3.47	2.47	2.66	3.89	3.66	2.86
t	2.34*	2.66*	2.63*	1.56	.12	.86	.48

[a]Subtest identification: 1. Word Meaning; 2. Listening Comprehension; 3. Matching; 4. Alphabet; 5. Numbers; 6. Copying.

* $p < .05$
** $p < .01$

In terms of the total group, the means scores for the Spanish version were significantly higher than those for the English version for the total score and for all subtests except Numbers and Copying.

For the bilingual subsample, the means of Spanish version significantly surpassed those of the English version on all subtests except Copying. The differences were less dramatic for the sample from the regular English-only classes, the means of the Spanish version significantly surpassed those of the English version for subtest 1 (Word Meaning), subtest 2 (Listening), and Total Score.

DISCUSSION

The results of the total group are in line with the general weight of research evidence (Zirkel, 1972) -- namely, that the language of a standardized test significantly affects the results of Spanish-speaking students, particularly at the early grades and for language-laden subtests. The results of the subgroups underline the importance of testing in Spanish as well as English in bilingual classes. The superiority of these pupils' Spanish scores was significant beyond the .01 level for all but the two most non-verbal subtests. Moreover, it should be noted that even for pupils in all-English classes, the language barrier in the two most verbal subtests was significantly reflected in their total scores.

The difference between the results of this study and those of the Davis and Personke study may possibly be attributable to design considerations. In the Davis and Personke study the testing of the subsamples intact in groupings which appeared to correspond to English- and Spanish-dominance* and their retesting with the same form of the instrument may have led to a practice effect which would have served to mitigate any gap between the Spanish and English means of each subsample. Anastasi and Cordova (1953), for example, found a significant practice effect by utilizing a standardized test instrument in a similar design with Spanish-speaking students. Although a study by Greene and Zirkel (1974) revealed only a slight non-significant practice effect, they employed different forms of the same instrument where Davis and Personke employed only one form of the MRT. If a significant practice effect did occur in their study, the disproportionate weighting of the subsamples (over 2:1) in favor of the pupils with spuriously inflated English scores would have tended to neutralize any superiority in the Spanish mean of the total sample.

Other possible explanations which may have contributed to the differences between the two studies include

* Language dominance is used here to refer to relative aural proficienty in Spanish vs. English (see Zirkel, 1974).

ethnic and geographic factors. Personke and Davis' subjects were evidently Mexican-American while the subjects of the present study were exclusively Puerto Rican There is a lack of empirical data and a diversity of opinion (e.g. Gaarder, 1973) regarding the relative native and second language abilities of these two mainland minorities. Within each group the extent of Spanish usage may vary significantly according to such factors as locality, SES, and the ethnic mix of the school (Valencia, 1969). A consideration of these differences serves to reveal the complexity and richness underlying such generic terms as "Spanish-speaking" and "bilingual."

The respective results of the two studies in terms of subtest 4 (Alphabet) merit special mention. It is not entirely clear whether the letters of the alphabet as well as the accompanying directions were translated in the Personke and Davis study. If not, the procedure would exemplify the current practice of some test publishers in issuing so-called Spanish versions of their tests which consist of no more than Spanish directions for items in English. Such a practice may serve only to compound the confusion and what Anastasi and Cordova (1953, p. 19) termed the "psychological insulation" characterizing Spanish-speaking youngsters when faced with standardized tests and

content instruction totally in English.* If, as is more likely the case, Davis and Personke had the letters of the alphabet pronounced in Spanish along with the directions, the depressed state of the Spanish scores for this subtest relative to the English scores evidently reflect the English-only instruction then prevailing in most public schools. The increasing option of instruction offered in the native language of such pupils, as exemplified by the bilingual education subsample in the present study, necessitate the development and standardization of tests which are in these pupils' native language and consonant with their cultural background.

For, the findings of this study are not interpreted as a recommendation for the wholesale translation of standardized tests into Spanish for use with Spanish-speaking children. Not only are such translations often poorly done, but as Finch (1971) stated, "the development of tests appropriate to Spanish-speaking children is far more than simply translating existing tests." Differences between the lexicon, morphology, syntax, and phonology of the respective languages and dialects plus underlying cultural contrasts preclude translations from being the final answer. Rather, the findings point to the need for recognizing and reflecting the native linguistic-cultural background of

* Several studies review by Zirkel (1973) revealed inconsistent findings regarding the significance of Spanish directions for nonverbal intelligence tests but no studies were reported investigating the effect of Spanish directions for English verbal tests.

Spanish-speaking students in the instrumentation as well as instruction offered by our public schools.

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